



# SEQUENCE LISTING

<110> Merck & Co., Inc.  
Chen, Fang

<120> Method for identifying androgen receptor  
modulators with full or mixed agonist activity

<130> 21506YP

<140> US 10/580,285

<141> 2006-05-24

<150> PCT/US2004/038859

<151> 2004-11-19

<150> US 60/524,455

<151> 2003-11-24

<160> 3

<170> FastSEQ for Windows Version 4.0

<210> 1

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<212> RNA

<213> Homo sapien

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| aggcaccag   | aggccgcgag  | cgcagcacct | cccggcgcca  | gtttgctgct  | gctgcagcag  | 180  |
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| tacctgggtcc | tggatgagga  | acagcaacct | tcacagccgc  | agtcggccct  | ggagtgccac  | 360  |
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| ctggggcccca | ctttcccccg  | cttaagcagc | tgctccgctg  | accttaaaga  | catectgagc  | 540  |
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| tttctgaatg  | tcttgggaag  | cattgagcca | gggtgtagtg  | gtgctggaca  | cgacaacaac  | 2040 |
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<212> PRT

<213> Homo sapien

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Val Ile Gln Asn Pro Gly Pro Arg His Pro Glu Ala Ala Ser Ala Ala
 35          40          45
Pro Pro Gly Ala Ser Leu Leu Leu Gln Gln Gln Gln Gln Gln Gln
 50          55          60
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 65          70          75          80
Gln Gln Gln Gln Gly Glu Asp Gly Ser Pro Gln Ala His Arg Arg Gly
 85          90          95
Pro Thr Gly Tyr Leu Val Leu Asp Glu Glu Gln Gln Pro Ser Gln Pro
 100          105          110
Gln Ser Ala Leu Glu Cys His Pro Glu Arg Gly Cys Val Pro Glu Pro
 115          120          125
Gly Ala Ala Val Ala Ala Ser Lys Gly Leu Pro Gln Gln Leu Pro Ala
 130          135          140
Pro Pro Asp Glu Asp Asp Ser Ala Ala Pro Ser Thr Leu Ser Leu Leu
 145          150          155          160
Gly Pro Thr Phe Pro Gly Leu Ser Ser Cys Ser Ala Asp Leu Lys Asp
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Glu Ala Val Ser Glu Gly Ser Ser Gly Arg Ala Arg Glu Ala Ser
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Gly Ala Pro Thr Ser Ser Lys Asp Asn Tyr Leu Gly Gly Thr Ser Thr
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Arg Pro Thr Pro Cys Ala Pro Leu Ala Glu Cys Lys Gly Ser Leu Leu
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Asp Asp Ser Ala Gly Lys Ser Thr Glu Asp Thr Ala Glu Tyr Ser Pro
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Phe Lys Gly Gly Tyr Thr Lys Gly Leu Glu Gly Glu Ser Leu Gly Cys
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Gln Ser Arg Asp Tyr Tyr Asn Phe Pro Leu Ala Leu Ala Gly Pro Pro
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|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Pro | Pro | Pro | Pro | Pro | Pro | His | Pro | His | Ala | Arg | Ile | Lys | Leu | Glu | Asn |
|     | 370 |     |     |     |     | 375 |     |     |     |     | 380 |     |     |     |     |
| Pro | Leu | Asp | Tyr | Gly | Ser | Ala | Trp | Ala | Ala | Ala | Ala | Ala | Gln | Cys | Arg |
| 385 |     |     |     |     | 390 |     |     |     |     | 395 |     |     |     |     | 400 |
| Tyr | Gly | Asp | Leu | Ala | Ser | Leu | His | Gly | Ala | Gly | Ala | Ala | Gly | Pro | Gly |
|     |     |     |     | 405 |     |     |     |     | 410 |     |     |     |     | 415 |     |
| Ser | Gly | Ser | Pro | Ser | Ala | Ala | Ala | Ser | Ser | Ser | Trp | His | Thr | Leu | Phe |
|     |     |     | 420 |     |     |     |     | 425 |     |     |     |     | 430 |     |     |
| Thr | Ala | Glu | Glu | Gly | Gln | Leu | Tyr | Gly | Pro | Cys | Gly | Gly | Gly | Gly | Gly |
|     |     | 435 |     |     |     |     | 440 |     |     |     |     | 445 |     |     |     |
| Gly | Gly | Gly | Gly | Gly | Gly | Gly | Gly | Gly | Gly | Gly | Glu | Ala | Gly | Ala | Val |
|     | 450 |     |     |     |     | 455 |     |     |     |     | 460 |     |     |     |     |
| Ala | Pro | Tyr | Gly | Tyr | Thr | Arg | Pro | Pro | Gln | Gly | Leu | Ala | Gly | Gln | Glu |
| 465 |     |     |     |     | 470 |     |     |     |     | 475 |     |     |     |     | 480 |
| Ser | Asp | Phe | Thr | Ala | Pro | Asp | Val | Trp | Tyr | Pro | Gly | Gly | Met | Val | Ser |
|     |     |     |     | 485 |     |     |     |     | 490 |     |     |     |     | 495 |     |
| Arg | Val | Pro | Tyr | Pro | Ser | Pro | Thr | Cys | Val | Lys | Ser | Glu | Met | Gly | Pro |
|     |     |     | 500 |     |     |     |     | 505 |     |     |     |     | 510 |     |     |
| Trp | Met | Asp | Ser | Tyr | Ser | Gly | Pro | Tyr | Gly | Asp | Met | Arg | Leu | Glu | Thr |
|     |     | 515 |     |     |     |     | 520 |     |     |     |     | 525 |     |     |     |
| Ala | Arg | Asp | His | Val | Leu | Pro | Ile | Asp | Tyr | Tyr | Phe | Pro | Pro | Gln | Lys |
|     | 530 |     |     |     |     | 535 |     |     |     |     | 540 |     |     |     |     |
| Thr | Cys | Leu | Ile | Cys | Gly | Asp | Glu | Ala | Ser | Gly | Cys | His | Tyr | Gly | Ala |
| 545 |     |     |     |     | 550 |     |     |     |     | 555 |     |     |     |     | 560 |
| Leu | Thr | Cys | Gly | Ser | Cys | Lys | Val | Phe | Phe | Lys | Arg | Ala | Ala | Glu | Gly |
|     |     |     |     | 565 |     |     |     |     | 570 |     |     |     |     | 575 |     |
| Lys | Gln | Lys | Tyr | Leu | Cys | Ala | Ser | Arg | Asn | Asp | Cys | Thr | Ile | Asp | Lys |
|     |     |     | 580 |     |     |     |     | 585 |     |     |     |     | 590 |     |     |
| Phe | Arg | Arg | Lys | Asn | Cys | Pro | Ser | Cys | Arg | Leu | Arg | Lys | Cys | Tyr | Glu |
|     |     | 595 |     |     |     |     | 600 |     |     |     |     | 605 |     |     |     |
| Ala | Gly | Met | Thr | Leu | Gly | Ala | Arg | Lys | Leu | Lys | Lys | Leu | Gly | Asn | Leu |
|     | 610 |     |     |     |     | 615 |     |     |     |     | 620 |     |     |     |     |
| Lys | Leu | Gln | Glu | Glu | Gly | Glu | Ala | Ser | Ser | Thr | Thr | Ser | Pro | Thr | Glu |
| 625 |     |     |     |     | 630 |     |     |     |     | 635 |     |     |     |     | 640 |
| Glu | Thr | Thr | Gln | Lys | Leu | Thr | Val | Ser | His | Ile | Glu | Gly | Tyr | Glu | Cys |
|     |     |     |     | 645 |     |     |     |     | 650 |     |     |     |     | 655 |     |
| Gln | Pro | Ile | Phe | Leu | Asn | Val | Leu | Glu | Ala | Ile | Glu | Pro | Gly | Val | Val |
|     |     |     | 660 |     |     |     |     | 665 |     |     |     |     | 670 |     |     |
| Cys | Ala | Gly | His | Asp | Asn | Asn | Gln | Pro | Asp | Ser | Phe | Ala | Ala | Leu | Leu |
|     |     | 675 |     |     |     |     | 680 |     |     |     |     | 685 |     |     |     |
| Ser | Ser | Leu | Asn | Glu | Leu | Gly | Glu | Arg | Gln | Leu | Val | His | Val | Val | Lys |
|     |     | 690 |     |     |     | 695 |     |     |     |     | 700 |     |     |     |     |
| Trp | Ala | Lys | Ala | Leu | Pro | Gly | Leu | Arg | Asn | Leu | His | Val | Asp | Asp | Gln |
| 705 |     |     |     |     | 710 |     |     |     |     | 715 |     |     |     |     | 720 |
| Met | Ala | Val | Ile | Gln | Tyr | Ser | Trp | Met | Gly | Leu | Met | Val | Phe | Ala | Met |
|     |     |     |     | 725 |     |     |     |     | 730 |     |     |     | 735 |     |     |
| Gly | Trp | Arg | Ser | Phe | Thr | Asn | Val | Asn | Ser | Arg | Met | Leu | Tyr | Phe | Ala |
|     |     |     | 740 |     |     |     |     | 745 |     |     |     |     | 750 |     |     |
| Pro | Asp | Leu | Val | Phe | Asn | Glu | Tyr | Arg | Met | His | Lys | Ser | Arg | Met | Tyr |
|     |     | 755 |     |     |     |     | 760 |     |     |     |     | 765 |     |     |     |
| Ser | Gln | Cys | Val | Arg | Met | Arg | His | Leu | Ser | Gln | Glu | Phe | Gly | Trp | Leu |
|     | 770 |     |     |     |     | 775 |     |     |     |     | 780 |     |     |     |     |
| Gln | Ile | Thr | Pro | Gln | Glu | Phe | Leu | Cys | Met | Lys | Ala | Met | Leu | Leu | Phe |
| 785 |     |     |     |     | 790 |     |     |     |     | 795 |     |     |     |     | 800 |
| Ser | Ile | Ile | Pro | Val | Asp | Gly | Leu | Lys | Asn | Gln | Lys | Phe | Phe | Asp | Glu |
|     |     |     |     | 805 |     |     |     |     | 810 |     |     |     |     | 815 |     |
| Leu | Arg | Met | Asn | Tyr | Ile | Lys | Glu | Leu | Asp | Arg | Ile | Ile | Ala | Cys | Lys |
|     |     |     | 820 |     |     |     |     | 825 |     |     |     |     | 830 |     |     |
| Arg | Lys | Asn | Pro | Thr | Ser | Cys | Ser | Arg | Arg | Phe | Tyr | Gln | Leu | Thr | Lys |
|     |     | 835 |     |     |     |     | 840 |     |     |     |     | 845 |     |     |     |
| Leu | Leu | Asp | Ser | Val | His | Pro | Ile | Ala | Arg | Glu | Leu | His | Gln | Phe | Thr |
|     |     | 850 |     |     |     | 855 |     |     |     |     | 860 |     |     |     |     |
| Phe | Asp | Leu | Leu | Ile | Lys | Ser | His | Met | Val | Ser | Val | Asp | Phe | Pro | Glu |
| 865 |     |     |     |     | 870 |     |     |     |     | 875 |     |     |     |     | 880 |
| Met | Met | Ala | Glu | Ile | Ile | Ser | Val | Gln | Val | Pro | Lys | Ile | Leu | Ser | Gly |
|     |     |     |     | 885 |     |     |     |     | 890 |     |     |     |     | 895 |     |

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 <211> 895  
 <212> PRT  
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 Pro Pro Gly Ala Ser Leu Gln Gln Gln Gln Gln Gln Glu Thr  
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 Gln Ala His Arg Arg Gly Pro Thr Gly Tyr Leu Val Leu Asp Glu Glu  
 85 90 95  
 Gln Gln Pro Ser Gln Pro Gln Ser Ala Pro Glu Cys His Pro Glu Arg  
 100 105 110  
 Gly Cys Val Pro Glu Pro Gly Ala Ala Val Ala Ala Gly Lys Gly Leu  
 115 120 125  
 Pro Gln Gln Leu Pro Ala Pro Asp Glu Asp Asp Ser Ala Ala Pro  
 130 135 140  
 Ser Thr Leu Ser Leu Leu Gly Pro Thr Phe Pro Gly Leu Ser Ser Cys  
 145 150 155 160  
 Ser Ala Asp Leu Lys Asp Ile Leu Ser Glu Ala Ser Thr Met Gln Leu  
 165 170 175  
 Leu Gln Gln Gln Gln Gln Glu Ala Val Ser Glu Gly Ser Ser Ser Gly  
 180 185 190  
 Arg Ala Arg Glu Ala Ser Gly Ala Pro Thr Ser Ser Lys Asp Asn Tyr  
 195 200 205  
 Leu Glu Gly Thr Ser Thr Ile Ser Asp Ser Ala Lys Glu Leu Cys Lys  
 210 215 220  
 Ala Val Ser Val Ser Met Gly Leu Gly Val Glu Ala Leu Glu His Leu  
 225 230 235 240  
 Ser Pro Gly Glu Gln Leu Arg Gly Asp Cys Met Tyr Ala Pro Val Leu  
 245 250 255  
 Gly Val Pro Pro Ala Val Arg Pro Thr Pro Cys Ala Pro Leu Ala Glu  
 260 265 270  
 Cys Lys Gly Ser Leu Leu Asp Asp Ser Ala Gly Lys Ser Thr Glu Asp  
 275 280 285  
 Thr Ala Glu Tyr Ser Pro Phe Lys Gly Gly Tyr Thr Lys Gly Leu Glu  
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 Thr Leu Glu Leu Pro Ser Thr Leu Ser Leu Tyr Lys Ser Gly Ala Leu  
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 Asp Glu Ala Ala Ala Tyr Gln Ser Arg Asp Tyr Tyr Asn Phe Pro Leu  
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 Ala Leu Ala Gly Pro Pro Pro Pro Pro Pro Pro His Pro His Ala  
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 Arg Ile Lys Leu Glu Asn Pro Leu Asp Tyr Gly Ser Ala Trp Ala Ala  
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 Gly Ala Ala Gly Pro Gly Ser Gly Ser Pro Ser Ala Ala Ala Ser Ser  
 405 410 415  
 Ser Trp His Thr Leu Phe Thr Ala Glu Glu Gly Gln Leu Tyr Gly Pro  
 420 425 430  
 Cys Gly Gly Gly Gly Gly Gly Gly Gly Gly Gly Gly Ala Gly  
 435 440 445

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Glu | Ala | Gly | Ala | Val | Ala | Pro | Tyr | Gly | Tyr | Thr | Arg | Pro | Pro | Gln | Gly |
| 450 |     |     |     |     |     | 455 |     |     |     |     | 460 |     |     |     |     |
| Leu | Ala | Gly | Gln | Glu | Gly | Asp | Phe | Thr | Ala | Pro | Asp | Val | Trp | Tyr | Pro |
| 465 |     |     |     |     | 470 |     |     |     |     | 475 |     |     |     |     | 480 |
| Gly | Gly | Met | Val | Ser | Arg | Val | Pro | Tyr | Pro | Ser | Pro | Thr | Cys | Val | Lys |
|     |     |     |     | 485 |     |     |     |     | 490 |     |     |     |     | 495 |     |
| Ser | Glu | Met | Gly | Pro | Trp | Met | Asp | Ser | Tyr | Ser | Gly | Pro | Tyr | Gly | Asp |
|     |     |     | 500 |     |     |     |     | 505 |     |     |     |     | 510 |     |     |
| Met | Arg | Leu | Glu | Thr | Ala | Arg | Asp | His | Val | Leu | Pro | Ile | Asp | Tyr | Tyr |
|     |     | 515 |     |     |     |     | 520 |     |     |     |     | 525 |     |     |     |
| Phe | Pro | Pro | Gln | Lys | Thr | Cys | Leu | Ile | Cys | Gly | Asp | Glu | Ala | Ser | Gly |
| 530 |     |     |     |     |     | 535 |     |     |     |     | 540 |     |     |     |     |
| Cys | His | Tyr | Gly | Ala | Leu | Thr | Cys | Gly | Ser | Cys | Lys | Val | Phe | Phe | Lys |
| 545 |     |     |     |     | 550 |     |     |     |     | 555 |     |     |     |     | 560 |
| Arg | Ala | Ala | Glu | Gly | Lys | Gln | Lys | Tyr | Leu | Cys | Ala | Ser | Arg | Asn | Asp |
|     |     |     |     | 565 |     |     |     |     | 570 |     |     |     |     | 575 |     |
| Cys | Thr | Ile | Asp | Lys | Phe | Arg | Arg | Lys | Asn | Cys | Pro | Ser | Cys | Arg | Leu |
|     |     |     | 580 |     |     |     |     | 585 |     |     |     |     | 590 |     |     |
| Arg | Lys | Cys | Tyr | Glu | Ala | Gly | Met | Thr | Leu | Gly | Ala | Arg | Lys | Leu | Lys |
|     |     | 595 |     |     |     |     | 600 |     |     |     |     | 605 |     |     |     |
| Lys | Leu | Gly | Asn | Leu | Lys | Leu | Gln | Glu | Glu | Gly | Glu | Ala | Ser | Ser | Thr |
| 610 |     |     |     |     |     | 615 |     |     |     |     | 620 |     |     |     |     |
| Thr | Ser | Pro | Thr | Glu | Glu | Thr | Ala | Gln | Lys | Leu | Thr | Val | Ser | His | Ile |
| 625 |     |     |     |     | 630 |     |     |     |     | 635 |     |     |     |     | 640 |
| Glu | Gly | Tyr | Glu | Cys | Gln | Pro | Ile | Phe | Leu | Asn | Val | Leu | Glu | Ala | Ile |
|     |     |     |     | 645 |     |     |     |     | 650 |     |     |     |     | 655 |     |
| Glu | Pro | Gly | Val | Val | Cys | Ala | Gly | His | Asp | Asn | Asn | Gln | Pro | Asp | Ser |
|     |     |     | 660 |     |     |     |     | 665 |     |     |     |     | 670 |     |     |
| Phe | Ala | Ala | Leu | Leu | Ser | Ser | Leu | Asn | Glu | Leu | Gly | Glu | Arg | Gln | Leu |
|     |     | 675 |     |     |     |     | 680 |     |     |     |     | 685 |     |     |     |
| Val | His | Val | Val | Lys | Trp | Ala | Lys | Ala | Leu | Pro | Gly | Phe | Arg | Asn | Leu |
|     |     | 690 |     |     |     | 695 |     |     |     |     | 700 |     |     |     |     |
| His | Val | Asp | Asp | Gln | Met | Ala | Val | Ile | Gln | Tyr | Ser | Trp | Met | Gly | Leu |
| 705 |     |     |     |     | 710 |     |     |     |     | 715 |     |     |     |     | 720 |
| Met | Val | Phe | Ala | Met | Gly | Trp | Arg | Ser | Phe | Thr | Asn | Val | Asn | Ser | Arg |
|     |     |     |     | 725 |     |     |     |     | 730 |     |     |     |     | 735 |     |
| Met | Leu | Tyr | Phe | Ala | Pro | Asp | Leu | Val | Phe | Asn | Glu | Tyr | Arg | Met | His |
|     |     |     | 740 |     |     |     |     | 745 |     |     |     |     | 750 |     |     |
| Lys | Ser | Arg | Met | Tyr | Ser | Gln | Cys | Val | Arg | Met | Arg | His | Leu | Ser | Gln |
|     |     | 755 |     |     |     |     | 760 |     |     |     |     | 765 |     |     |     |
| Glu | Phe | Gly | Trp | Leu | Gln | Ile | Thr | Pro | Gln | Glu | Phe | Leu | Cys | Met | Lys |
|     |     | 770 |     |     |     | 775 |     |     |     |     | 780 |     |     |     |     |
| Ala | Leu | Leu | Leu | Phe | Ser | Ile | Ile | Pro | Val | Asp | Gly | Leu | Lys | Asn | Gln |
| 785 |     |     |     |     | 790 |     |     |     |     | 795 |     |     |     |     | 800 |
| Lys | Phe | Phe | Asp | Glu | Leu | Arg | Met | Asn | Tyr | Ile | Lys | Glu | Leu | Asp | Arg |
|     |     |     |     | 805 |     |     |     |     | 810 |     |     |     |     | 815 |     |
| Ile | Ile | Ala | Cys | Lys | Arg | Lys | Asn | Pro | Thr | Ser | Cys | Ser | Arg | Arg | Phe |
|     |     |     | 820 |     |     |     |     | 825 |     |     |     |     | 830 |     |     |
| Tyr | Gln | Leu | Thr | Lys | Leu | Leu | Asp | Ser | Val | Gln | Pro | Ile | Ala | Arg | Glu |
|     |     | 835 |     |     |     |     | 840 |     |     |     |     | 845 |     |     |     |
| Leu | His | Gln | Phe | Thr | Phe | Asp | Leu | Leu | Ile | Lys | Ser | His | Met | Val | Ser |
|     |     | 850 |     |     |     | 855 |     |     |     |     | 860 |     |     |     |     |
| Val | Asp | Phe | Pro | Glu | Met | Met | Ala | Glu | Ile | Ile | Ser | Val | Gln | Val | Pro |
| 865 |     |     |     |     | 870 |     |     |     |     | 875 |     |     |     |     | 880 |
| Lys | Ile | Leu | Ser | Gly | Lys | Val | Lys | Pro | Ile | Tyr | Phe | His | Thr | Gln |     |
|     |     |     |     | 885 |     |     |     |     | 890 |     |     |     |     | 895 |     |